First Hit Fwd Refs
End of Result Set

Generate Collection Print

L2: Entry 1 of 1 File: USPT Sep 11, 2001

DOCUMENT-IDENTIFIER: US 6289322 B1
TITLE: Electronic bill processing

Drawing Description Text (22):
FIG. 14 depicts a biller category screen in accordance with the present invention.

Detailed Description Text (37):
From screen 800, the payor can also access either bill presentment information related to previously transmitted billing information, including information relating to unpaid bills or paid bills, as well as information relating to previously accessed messages by clicking on indicator 830a to receive the unpaid bills, indicator 840a to access bill presentment information related to paid bills, and indicator 850a to access other messages. The payor can also select categories as indicated in block 870 by clicking on indicator 870a. Responsive to clicking on indicator 870a, the CF station 140 will transmit a screen which will be described below and allows the payor to categorize billers in any desired manner.

Detailed Description Text (44):
FIG. 9B depicts screen 930 which can be transmitted from the CF station 140 to present summary bill related information at the payor station 120a-12d in a categorized manner. As shown, by clicking on indicator 935, categories of billers are changed in block 940. For example, in screen 930 the category has been set to unpaid bills and accordingly, a summary of all unpaid bills appears on the payor display 460. Other categories could be, for example, utility bills, paid bills, questioned bills, credit card bills or any other category which may be desirable under the particular circumstances. In screen 930, one or more of the check blocks 945 can be clicked on along with the pay bill indicator 950 to direct a communication from the payor station 120a-120d to the CF station 140 instructing particular bills which are summarized in screen 930 should be paid on the due date. Indicator 955 allows the check blocks 945 to be reset in the event that a block is inadvertently checked.

Detailed Description Text (47):
Block 996 identifies the category of billers with respect to whom bill related information is summarized in screen 960. An indicator arrow 996a can be clicked on to scroll through various categories of billers to change the information summarized summarized on screen 960, as has been previously described with reference to FIG. 9B. Additionally, dates can be inserted in block 998 to limit or extend the amount of bill summary information which is displayed. The arrow indicator 998a can be used to change the "TO" date.

Detailed Description Text (59):
FIG. 14 depicts a screen 1400 which, responsive to a request from a payor, is transmitted by the CF processor 140 to the payor station 120a-120d. Screen 1400 allows the payor to establish certain categories of billers, as has been previously discussed. For example, the biller may, in block 1405, establish categories for utilities, credit card companies, school, tennis related activities and any other categories as may be desired by an individual payor. By clicking on the reset

indicator 1410, the payor can modify the listed categories. The selected categories and any changes to the category listings are saved by clicking on indicator 1415.

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First Hit Fwd Refs

Generate Collection Print

L6: Entry 6 of 13 File: USPT Oct 3, 2000

DOCUMENT-IDENTIFIER: US 6128603 A
** See image for Certificate of Correction **
TITLE: Consumer-based system and method for managing and paying electronic billing statements

Abstract Text (1):
A consumer-based bill management and payment system is configured to receive, analyze, manage and pay electronic billing statements received from the biller over the Internet. The system includes a notification manager that detects when the electronic bill arrives and notifies the consumer. The bill is stored in memory with with other unpaid electronic bills. According to another aspect of the invention, the system has a cashflow analyzer that enables the consumer to coordinate the unpaid electronic bills according to different payment schedules for a bill payment cycle (e.g., a month). The goal of the manipulation is to permit the consumer to analyze how the different payment schedules affect the consumer's cashflow with an aim toward minimizing overdraft during the bill payment cycle. The cashflow analyzer can automatically compute an optimized payment schedule that minimizes overdraft of the consumer's account, while maximizing the balance to generate the most interest. When the consumer desires to pay a particular bill, the bill is presented to the consumer through a graphical user interface (UI). The bill management and payment system supports a payment analyzer to enable the consumer to determine how much of the electronic bill to pay. The payment analyzer provides a venue to challenge certain items on the bill.

Brief Summary Text (9):
Once the payment plan is finished, the consumer typically pays the bills by check. Depending upon the analysis, the payment may partially or fully satisfy the amount due in the bill. For each bill, the consumer fills out the payment information on the remittance stub (e.g., amount paid, payment date, and account number), encloses the stub and check in an envelope (often, pre-addressed), and mails it back to the biller using the U.S. postal service.

Brief Summary Text (10):
The conventional paper-based billing system has many drawbacks. There are many headaches associated with collecting bills without misplacing them, organizing the bills, figuring out a payment plan, writing the checks, and so forth. In the end, after all the bills have been paid, the checking account often reflects an ending balance (if Murphy's Law holds) that is lower than the estimated balance derived on the paper tablet.

Brief Summary Text (12):
reduce the amount paid for the bill. Under present practices, if a consumer wishes to dispute part or the entire bill or remove a transaction item from the bill, the consumer must call the billing company and discuss the matter with a representative. In many cases, the consumer is asked to submit a written letter explaining why the bill is inaccurate. This technique is time consuming, inconvenient and frustrating for the consumer, expensive for the biller, and can induce errors if the partial payment submitted by the consumer is not properly matched up with the appropriate items being paid and those items being challenged.

Thank goodness bill payment is limited to once or twice a month.

Brief Summary Text (19):
This invention generally concerns an electronic bill presentment and payment remittance system in which electronic bills are delivered to consumers over an electronic network, such as the Internet. The biller designs how a billing statement and payment remittance information will appear to the consumer and electronically transmits the customized statement and remittance information over the Internet to a consumer's computer.

Brief Summary Text (20):
More specifically, this invention concerns a consumer-based system and method for receiving, analyzing, managing and paying the electronic billing statements received from the biller. According to one aspect of the invention, the bill management and payment system (the billing service) has a notification manager that detects when the electronic bill arrives and notifies the consumer. There is a variety of ways to notify the consumer, including displaying a bill arrival notice on the consumer's display, waking-up the computer, launching the personal finance management application (PFM), or having the billing service call or fax the notice. The bill management and payment system stores the bill in memory with other unpaid electronic bills.

Brief Summary Text (21):
According to another aspect of the invention, the system enables the consumer to coordinate the unpaid electronic bills according to different payment schedules for a bill payment cycle (e.g., a month). The goal of the manipulation is to permit the consumer to analyze how the different payment schedules affect the consumer's cashflow with an aim toward minimizing overdraft during the bill payment cycle.

Brief Summary Text (22):
In one implementation, the bill management and payment system supports a cashflow analyzer user interface (UI) that presents a list of icons representing the unpaid electronic bills and a date line showing dates in the bill payment cycle. The cashflow analyzer UI enables a consumer to drag and drop the unpaid bill icons from the list, as well as other cashflow items (e.g., paycheck) onto certain dates of the date line. One option is to have the bills automatically "snap" to the appropriate due date, as an initial placement of the bills on the dates of the payment cycle.

Brief Summary Text (23):
The consumer can then move the unpaid bill icons and cashflow items about in the date line to form different payment schedules for the billing cycle. The cashflow analyzer UI shows the consumer's payment account information and automatically adjusts the account information for each date as the consumer moves the unpaid bill icons and cashflow items to form different payment schedules.

Brief Summary Text (25):
When the consumer desires to pay a particular bill, the bill is presented to the consumer through a graphical user interface (UI). The bill appears according to the biller's design. According to another aspect of this invention, the bill management and payment system supports a payment analyzer to enable the consumer to determine how much of the electronic bill to pay. Unlike existing direct debit arrangements, the consumer is in direct control of the amount to be paid and the payment date as well as which account they wish to use to pay the bill (assuming they have more than one account). The consumer specifies the payment date and the dollar amount to be paid. The consumer can make partial or full payment toward the bill balance. The consumer exercises control of the payment remittance process every time a payment is made.

Brief Summary Text (26):

Moreover, the payment analyzer provides a venue to challenge certain items on the bill. In one implementation, the biller provides a line-by-line itemization of the bill, along with predefined dispute reasons that the consumer can check to challenge challenge particular items on the bill. The bill contains by itself, or in conjunction with the payment analyzer, executable code to automatically reduce the amount paid number to reflect any disputed amounts. The UI also permits the consumer consumer to open dialog boxes to more fully explain reasons for disputing a bill, or to change an address, or to submit other types of communication.

Drawing Description Text (2):
FIG. 1 is a diagrammatic illustration of a bill presentment and payment system.

Drawing Description Text (6):
FIG. 5 shows an example illustration of a graphical user interface window containing an icon list of unpaid electronic bills.

Detailed Description Text (3):
FIG. 1 shows an electronic bill presentment and payment system 20 in which a biller 22 creates and electronically distributes its billing statements 24 via a service center (not shown) over a network 26, such as the Internet, to multiple consumers 28(1), 28(2), . . . , 28(N). The bill presentment and payment system 20 is an electronic, computerized system having computing units at the biller 22 and consumers 28(1)-28(N). For convenience, the terms "biller" and "biller computing unit" are used interchangeably throughout this disclosure and referenced by the same numbers.

Detailed Description Text (4):
The biller computing unit 22 creates customized bills and payment remittance information in a preferred format. That is, the biller computing unit 22 can design the appearance of the bill, organize how the billing data is presented to the consumer, incorporate advertisements or hyperlinks to other services, and create the overall framework for navigating the bill itself. The bills are packaged in one or more data packets and transmitted over the Internet 26 to the consumers 28(1)-28 (N).

Detailed Description Text (6):
The consumer can elect to pay the bill electronically. The consumer may return a payment instruction to the biller 22, or a representative of the biller, over the Internet. An entire electronic billing system is described in U.S. patent application Ser. No. 08/734,518, entitled "Electronic Bill Presentment and Payment System", which was filed Oct. 18, 1996 in the names of Darren Remington and Warren Dent, and is assigned to Microsoft Corporation. This application is incorporated by reference.

Detailed Description Text (10):
A bill management application 48 runs on the operating system 46 to manage the electronic bills. The bill management application 48 can be a separate software component, or integrated with the consumer's personal finance management (PFM) software. The bill management application performs bill handling and management functions, such as receiving the electronic bills from the I/O port 42, storing them in the data memory 34 as unpaid bills 50, presenting the bills to the consumer, consumer, enabling payment of the bills, and returning the remittance and payment to the biller (or other receiving party).

Detailed Description Text (12):
The notification manager 52 can be implemented in several ways to give notice. One technique is to pop-up a notification dialog box on the display 38 when a bill arrives to inform the consumer of the bill's arrival.

Detailed Description Text (13):

FIG. 3 shows an example of a notification dialog box 66 that is presented on a display 38 when the bill arrives. The notification box 66 contains a message telling telling the consumer that a bill has arrived. The notification screen 66 can be configured to pop-up immediately, for example, when the consumer is actively viewing or interacting with the consumer interface unit, or to pop-up when the consumer first turns on the consumer interface unit.

Detailed Description Text (17):
When the bill arrives, the consumer may wish to examine the bill initially. The consumer can open the bill and present it on the display 38.

Detailed Description Text (21):
The billing statement 70 has a main body 78 that contains the billing particulars. On the summary page of the GPU Energy bill, the billing particulars in body 78 include an amount due, an amount previously paid, a billing period, and statistics on energy usage. On the "Details" page, the billing information in the body 78 might include line items detailing a purchase date, purchase order number, invoice number, item number, description of item, quantity, price, total, tax, and amount due.

Detailed Description Text (23):
With reference to FIG. 2, the consumer can invoke the cashflow analyzer 54 to assess how paying the bills will impact the consumer's cashflow. The cashflow analyzer 54 collects the unpaid electronic bills 50 received electronically from a biller and enables the consumer to coordinate the unpaid bills according to different possible payment schedules for a bill payment cycle, such as a two week period or a month. In so doing, the consumer can analyze how the different payment schedules affect the consumer's cashflow during the bill payment cycle. In the preferred embodiment, the cashflow analyzer 54 provides a graphical user interface to facilitate the consumer's review of the bill.

Detailed Description Text (24):
FIG. 5 shows an example of a graphical user interface window 80 presented by the cashflow analyzer 54 on display 38. The unpaid bills are represented as graphical icons 82, such as the icons for CableVision, SouthEastern Bell, Citizens Bank, American Express, and so on. The unpaid bill icons 82 are conveniently organized in a list. The unpaid bill list window 80 of the cashflow analyzer UI shows pertinent information regarding the unpaid bills, including the total amount due, minimum payment, due date, and category. The cashflow analyzer UI also provides a summary 84 of the consumer's account (in this case, the consumer's checking account), showing an account balance, any bills that the consumer has paid today, any pending payments, and the remaining available finds to pay bills.

Detailed Description Text (25):
The cashflow analyzer 54 enables the consumer to examine various payment schedules for the unpaid bills. The consumer invokes a second graphical user interface window that presents a date line or calendar showing dates in bill payment cycle.

Detailed Description Text (26):
FIG. 6 shows an example of the calendar user interface window 90 presented by the cashflow analyzer 54 on display 38. The calendar UI 90 is shown partially overlaid on the unpaid bill list window 80. The calendar UI 90 shows a date line 92 having a series of dates in a bill payment cycle arranged in a linear bar chart. The dates Jul. 29, 1996 to Aug. 7, 1996 are shown in FIG. 6. Each date has a zone 94 into which the bill icons are moved to propose various payment schedules.

Detailed Description Text (27):
The calendar UI 90 also contains a dynamic summary 96 of the consumer's account that changes as the consumer experiments with different payment schedules. Initially, as shown in FIG. 6, the date zones 94 in the date line 92 are empty.

Accordingly, the consumer's account balance in the calendar UI summary 96 reflects the same balance shown in the summary 84 of the unpaid bill list UI 80. The calendar calendar UI 90 also has a bar graph 98, with one bar associated with each date in the date line 92. The bar graph 98 reflects the consumer's account balance at each day within the payment cycle. Initially, the bars in the graph are all at the same height equal to the starting balance.

Detailed Description Text (28):
The calendar UI 90 also has a "Best Fit" button 100, which upon activation is by the consumer instructs the cashflow analyzer 54 to automatically derive an optimum payment schedule for the list of unpaid bills. The cashflow analyzer 54 seeks to minimize overdraft, while maximizing account balances, to thereby maximize the amount of interest earned. This aspect is described below in more detail.

Detailed Description Text (29):
When the consumer desires to experiment with different payment schedules, the consumer drags and drops the unpaid bill icons from the list screen 80 onto certain dates of the date line 92. Additionally, the consumer may drag other cashflow items--such as cash inflow items representing payday, a tax rebate, a bonus, etc. or cash outflow items representing an unexpected car payment, etc.--onto the date line 92. Icons 102, which are arranged beside the date line 92, represent other cashflow items.

Detailed Description Text (31):
Alternatively, the consumer can set an option to have the unpaid bills automatically "snap" to their appropriate due date, as an initial placement of the bills on the dates in the date line 92. When this option is set, the bill icons immediately jump to or appear on the appropriate dates.

Detailed Description Text (32):
FIG. 7 shows the overlapping cashflow analyzer windows 80 and 90 of FIG. 6, but after the consumer has placed the unpaid bill icons onto the date zones 94 of the date line 92. In this example, the CableVision bill icon is placed on the July 30.sup.th date, the American Express bill icon is placed on the August 2.sup.nd date, and so forth. Additionally, the consumer has dragged a payday icon to the August 5.sup.th date to reflect a cash inflow event.

Detailed Description Text (33):
By dragging the bill icons to various dates in the payment cycle, the consumer has effectively created a proposed payment schedule. As the consumer is dragging and dropping the icons, the cashflow analyzer 54 automatically computes the impact on cashflow. Namely, the cashflow analyzer automatically adjusts the account information in the summary 96 and the bars in the bar graph 98 to reflect the present schedule. For the bill arrangement shown in FIG. 7, the consumer's bank account reveals that after all the bills are paid and the payday is collected, the balance will be $57.73. Notice that in the interim between paying the bills and receiving a paycheck the consumers account balances actually become negative as indicated by the bars for August 2.sup.nd to August 4.sup.th. The negative bars can be colored (such as red) to help visually impart the fact that the account is in negative territory.

Detailed Description Text (34):
If the consumer is dissatisfied with the payment schedule, the consumer can simply manipulate one or all of the unpaid bill icons and other cashflow items to try different payment schedules. The consumer can also experiment with partial payment of certain bills to determine how that would impact the cashflow.

Detailed Description Text (36):
Step 1: Set all unpaid bills to their due date. If this payment schedule results in a positive balance, then the cashflow analyzer considers the payment schedule

optimized, and the process stops. If this payment schedule results in a negative balance, the process continues to the next step.

Detailed Description Text (37):
Step 2: The cashflow analyzer prompts the consumer to indicate which unpaid bills cannot be late. The cashflow analyzer eliminates these bills from any delay consideration. The remaining bills (referred to as subset A) are eligible for some manipulation.

Detailed Description Text (39):
Step 4: The cashflow analyzer determines a penalty cost, if any, on each bill in subset A, assuming they are paid late. This penalty cost is added to the appropriate appropriate bill amount due.

Detailed Description Text (43):
After the consumer has analyzed the unpaid bills and decided on a payment schedule, the consumer can pay specific bills as prescribed by the schedule. When paying a bill, the consumer displays the bill on the display and analyzes the individual bill bill using the payment analyzer 56 (FIG. 2). One bill format is shown in FIG. 4.

Detailed Description Text (44):
FIG. 8 shows another example of a graphical user interface window containing an electronic billing statement 110 presented by the payment analyzer 56 on display 38. 38. The billing statement is for a fictitious company Crown Home Improvement Center. The bill UI 110 has a main body portion 112 that lists individual line items for each purchase at Crown Home Improvement Center, with each line item containing the purchase date, purchase order number, invoice number, item number, description of item, quantity, price, total, tax, and amount due.

Detailed Description Text (45):
The bill presentment UI 110 provides an easy forum for the consumer to evaluate and challenge certain portions of the bill. It is common that a consumer might want to challenge a line item on the bill. For instance, the bill might include a tax on an item that is used for a non-taxable purpose, or the bill might include an item that has not yet been received by the consumer, or the bill might include an item that the consumer returned.

Detailed Description Text (48):
FIGS. 8 and 9 show an example of challenging a line item in the billing statement for Crown Home Improvement Center. FIG. 8 shows the billing statement as it originally arrives at the consumer. The billing statement includes an "amount due" column 114 that lists the amount due for each item purchased from Crown (e.g., the quantity purchased times the prices per unit, plus tax) and an "amount paid" column 116 that lists the amount paid for each item. When the bill arrives, the data in the the amount paid column 116 is dynamic data, which is initially set equal to the static data found in the amount due column 114.

Detailed Description Text (50):
FIG. 9 shows the bill UI 110 after the consumer has disputed four of the items. Upon clicking the appropriate cell, the bill UI 110 places a visible "check mark" in the appropriate cell. Where possible, the bill UI 110 automatically adjusts the amount paid column 116 to reflect the disputed amount. For example, when the consumer checks the tax-exempt column 118, the bill UI 110 automatically deducts the tax from the amount paid column 116. In some cases, however, the consumer inputs inputs the corrected amount paid to reflect the disputed amount. In this example, the consumer deducted part of the amount due for one-half of an order in which the consumer has not received the goods.

Other Reference Publication (7):
Anonymous, "Another Player Enters the Bill Presentment Game (Online Resources &

Communications teams with Electronic Funds & Data Corp and American Payment Systems to develop online bill presentment and bill payment service)", Report on Home Banking & Financial Services, v 2, n 12, p 3, Mar. 28, 1997.

Other Reference Publication (8):
Anonymous, "Bold moves (First Data Corp and Microsoft Corp are forming bill-pay and bill-presentment company, challenging Visa, Integrion and Checkfree)", Cards International, n 181, p .5., Jul. 31, 1997.

CLAIMS:

1. A consumer-based electronic bill management system implemented on a user interface unit, comprising:

a notification module to notify a consumer when electronic bills arrive;

a cashflow analysis module to enable the consumer to manage payment of the electronic bills based on impact to the consumer's cashflow, the cashflow analysis module presenting a graphical user interface (GUI) on the user interface unit that allows the consumer to arrange representations of unpaid bills according to different payment schedules, the GUI showing a list of unpaid electronic bills and a date line with dates in the bill payment cycle;

the cashflow analysis module being confirmed to enable the consumer to drag and drop the unpaid bill icons from the list onto certain dates of the date line to define the payment schedules and automatically adjust the consumer's cashflow during the bill payment cycle as the consumer drops the unpaid bill icons on selected dates; and

a payment analysis module to enable the consumer to determine how much of the electronic bill the consumer is willing to pay and when that payment should occur.

2. A consumer-based electronic bill management system as recited in claim 1, wherein the notification module displays a bill arrival notice on a display of the user interface unit when an electronic bill arrives.

8. A consumer-based electronic bill management system as recited in claim 1, wherein the payment analysis module presents the electronic bill as a list of payable items and predefined dispute reasons associated with the items that the consumer can select to challenge a particular item on the bill.

9. A method for handling an electronic bill received electronically from a biller, comprising the following steps:

receiving an electronic bill;

notifying a consumer that the electronic bill has arrived;

storing the electronic bill in a store of unpaid electronic bills;

presenting a list of icons representing the unpaid electronic bills in the store;

presenting a graphical user interface having a date line with dates in the bill payment cycle;

enabling the consumer to drag and drop the unpaid bill icons from the list onto certain dates of the date line to define different payment schedules for a bill payment cycle so that the consumer can analyze how the different payment schedules affect the consumer's cashflow during the bill payment cycle;

automatically adjusting a consumer's cashflow during the bill payment cycle as the consumer drops the unpaid bill icons on selected dates to define the pament schedules; and

enabling the consumer to specify amounts to be paid on the electronic bills.

10. A method as recited in claim 9, wherein the notifying step comprises the step of displaying a bill arrival notice on a display.

17. A method as recited in claim 9, further comprising the following steps:

presenting the electronic bill as a list of payable items and predefined dispute reasons associated with the items that the consumer can select to challenge a particular item on the bill; and

enabling the consumer to challenge a particular item on the electronic bill by selecting one of the associated dispute reasons.

18. A consumer-based electronic bill management system implemented on a user interface unit, comprising:

a cashflow analysis module to enable the consumer to manage payment of electronic bills based on impact to the consumer's cashflow, the cashflow analysis module presenting a graphical user interface (GUI) on the user interface unit, the GUI having a list of icons representing the unpaid electronic bills and a date line with dates in a bill payment cycle, the GUI enabling a consumer to drag and drop the unpaid bill icons from the list onto certain dates of the date line to define the payment schedules;

the cashflow analysis module automatically adjusting the consumer's cashflow during the bill payment cycle as the consumer drops the unpaid bill icons on selected dates to define the payment schedules; and

a payment analysis module to enable the consumer to determine how much of the electronic bill the consumer is willing to pay and when that payment should occur.

21. A consumer-based electronic bill management system as recited claim 18, wherein the payment analysis module presents the electronic bill as a of payable items and predefined dispute reasons associated with the items that consumer can select to challenge a particular item on the bill.

22. A consumer-based electronic bill management system implemented on a user interface unit, comprising:

a notification module to notify a consumer when electronic bills arrive;

a cashflow analysis module to enable the consumer to manage payment of the electronic bills based on impact to the consumer's cashflow, the cashflow analysis module presenting a graphical user interface (GUI) on the user interface unit, the GUI having a list of icons representing the unpaid electronic bills and a date line with dates in a bill payment cycle, the GUI enabling a consumer to drag and drop the unpaid bill icons from the list onto certain dates of the date line to define the payment schedules; and

the cashflow analysis module automatically adjusting the consumer's cashflow during the bill payment cycle as the consumer drops the unpaid bill icons on selected dates to define the payment schedules.

23. A consumer-based electronic bill management system as recited in claim 22, wherein the notification module displays a bill arrival notice on a display of the

user interface unit when an electronic bill arrives.